

ABSTRACT

[Abstract]

[Object] To provide low-overpotential electrodes for an electrochemical cell including a proton-conductive electrolyte and an electrochemical cell including the electrodes.

[Solving Means] The following reaction occurs at the interface between a gas phase and an anode 3:



At this time, the resultant protons (H^+) and electrons (e^-) exist in the anode 3. The subsequent electrode reaction is completed after the protons travel to an electrolyte 2 and the electrons travel to a lead 5. The reverse reaction occurs at a cathode 4 to generate hydrogen gas.

[Selected Figure] Fig. 1